

What is claimed is:

1. A communication apparatus for communicating with a plurality of stations and executing regulation control at a 5 time of congestion, comprising:

congestion monitoring means for monitoring a congestion state, setting a congestion level and determining whether or not to perform regulation based on said congestion level;

10 traffic measuring means for measuring a traffic intensity;

traffic comparison means for comparing said traffic intensity with a preset traffic-regulation start traffic intensity when it is determined that regulation is to be performed; and

15 regulation control means for performing traffic regulation control when a comparison result shows that said traffic intensity is equal to or greater than said traffic-regulation start traffic intensity, and performing regulation control on a maintenance and operation process 20 when said traffic intensity is smaller than said traffic-regulation start traffic intensity.

2. The communication apparatus according to claim 1, wherein said congestion monitoring means uses at least one 25 of a processor occupancy rate and a response time with respect to a received signal as an index at a time of setting said congestion level.

3. The communication apparatus according to claim 1,
wherein said regulation control means executes said traffic
regulation control by changing stations to be regulated and
5 a number of said stations to be regulated.

4. The communication apparatus according to claim 1,
wherein said regulation control means counts a number of
signals received from a station to be regulated and computes
10 a ratio of a signal to be regulated from a count value,
whereby said regulation control means executes said traffic
regulation control with a same congestion level in
accordance with said ratio.

15 5. A mobile communication system for communicating
with a plurality of stations and executing regulation
control at a time of congestion, comprising:

20 a plurality of mobile communication exchanges for
performing exchange control on signals with respect to radio
stations; and

25 a mobile communication control station including a
communication apparatus comprising congestion monitoring
means for monitoring a congestion state, setting a
congestion level and determining whether or not to perform
regulation based on said congestion level, traffic measuring
means for measuring a number of signals received from said
mobile communication exchanges as a traffic intensity,

traffic comparison means for comparing said traffic intensity with a preset traffic-regulation start traffic intensity when it is determined that regulation is to be performed, and regulation control means for performing traffic regulation control when a comparison result shows that said traffic intensity is equal to or greater than said traffic-regulation start traffic intensity, and performing regulation control on a maintenance and operation process when said traffic intensity is smaller than said traffic-regulation start traffic intensity.

6. The mobile communication system according to claim 5, wherein said congestion monitoring means uses at least one of a processor occupancy rate and a response time with respect to a received signal as an index at a time of setting said congestion level.

7. The mobile communication system according to claim 5, wherein said regulation control means executes said traffic regulation control by changing mobile communication exchanges to be regulated and a number of said mobile communication exchanges to be regulated.

8. The mobile communication system according to claim 5, wherein said regulation control means counts a number of signals received from a mobile communication exchange to be regulated and computes a ratio of a signal to be regulated

from a count value, whereby said regulation control means executes said traffic regulation control with a same congestion level in accordance with said ratio.

5 9. A mobile communication control station for communicating with a plurality of stations and executing regulation control at a time of congestion, comprising:

 congestion monitoring means for monitoring a congestion state, setting a congestion level and determining whether or 10 not to perform regulation based on said congestion level;

 traffic measuring means for measuring a number of signals received from a plurality of mobile communication exchanges as a traffic intensity;

 traffic comparison means for comparing said traffic 15 intensity with a preset traffic-regulation start traffic intensity when it is determined that regulation is to be performed; and

 regulation control means for performing traffic regulation control when a comparison result shows that said 20 traffic intensity is equal to or greater than said traffic-regulation start traffic intensity, and performing regulation control on a maintenance and operation process when said traffic intensity is smaller than said traffic-regulation start traffic intensity.

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 10. A client/server system for communicating with a plurality of clients and executing regulation control at a

time of congestion, comprising:

5 a plurality of client units for requesting services;
a server unit comprising congestion monitoring means
for monitoring a congestion state, setting a congestion
level and determining whether or not to perform regulation
based on said congestion level, traffic measuring means for
measuring a number of signals received from said client
units as a traffic intensity, traffic comparison means for
comparing said traffic intensity with a preset traffic-
10 regulation start traffic intensity when it is determined
that regulation is to be performed, and regulation control
means for performing traffic regulation control when a
comparison result shows that said traffic intensity is equal
to or greater than said traffic-regulation start traffic
15 intensity, and performing regulation control on a
maintenance and operation process when said traffic
intensity is smaller than said traffic-regulation start
traffic intensity.

20 11. The client/server system according to claim 10,
wherein said congestion monitoring means uses at least one
of a processor occupancy rate and a response time with
respect to a received signal as an index at a time of
setting said congestion level.

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12. The client/server system according to claim 10,
wherein said regulation control means executes said traffic

regulation control by changing client units to be regulated and a number of said client units to be regulated.

13. The client/server system according to claim 10,
5 wherein said regulation control means counts a number of signals received from a client unit to be regulated and computes a ratio of a signal to be regulated from a count value, whereby said regulation control means executes said traffic regulation control with a same congestion level in
10 accordance with said ratio.

14. A server unit for communicating with a plurality of clients and executing regulation control at a time of congestion, comprising:

15 congestion monitoring means for monitoring a congestion state, setting a congestion level and determining whether or not to perform regulation based on said congestion level;
 traffic measuring means for measuring a number of signals received from said clients as a traffic intensity;
20 traffic comparison means for comparing said traffic intensity with a preset traffic-regulation start traffic intensity when it is determined that regulation is to be performed; and

25 regulation control means for performing traffic regulation control when a comparison result shows that said traffic intensity is equal to or greater than said traffic-regulation start traffic intensity, and performing

regulation control on a maintenance and operation process when said traffic intensity is smaller than said traffic-regulation start traffic intensity.

5 15. A congestion regulation control method of communicating with a plurality of stations and executing regulation control at a time of congestion, comprising the steps of:

10 monitoring a congestion state, setting a congestion level and determining whether or not to perform regulation based on said congestion level;

15 measuring a number of received signals as a traffic intensity;

20 comparing said traffic intensity with a preset traffic-regulation start traffic intensity when it is determined that regulation is to be performed; and

25 performing traffic regulation control when a comparison result shows that said traffic intensity is equal to or greater than said traffic-regulation start traffic intensity, and performing regulation control on a maintenance and operation process when said traffic intensity is smaller than said traffic-regulation start traffic intensity.

30 16. The congestion regulation control method according to claim 15, wherein at least one of a processor occupancy rate and a response time with respect to a received signal is used as an index at a time of setting said congestion

level.

17. The congestion regulation control method according to claim 15, wherein said traffic regulation control is
5 carried out by changing stations to be regulated and a number of said stations to be regulated.

10 18. The congestion regulation control method according to claim 15, wherein a number of signals received from a station to be regulated is counted and a ratio of a signal to be regulated is computed from a count value, whereby said traffic regulation control is executed with a same congestion level in accordance with said ratio.

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